

**Notice of Allowability**

Application No.

10/612,084

Applicant(s)

CURRY ET AL.

Examiner

Pawandeep S. Dhingra

Art Unit

2625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 1/18/2008.
2. ☒ The allowed claim(s) is/are 1, 2, 4-12 and 14-19.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

  
TYLER LAMB, 415K INS  
SUPERVISOR/PATENT EXAMINER

## DETAILED ACTION

### *Allowable Subject Matter*

1. The following is an examiner's statement of reasons for allowance:

The invention is directed to a method and system for eliminating halftone screens from digitally scanned documents while preserving the quality and sharpness of text. Claims 1, 11 and 19 identify the uniquely distinct features of "detecting extrema in an image signal and a second filter output signal via a min- max texture detector included in each of frequency detection modules, and outputting respective detected signals; and filtering the respective detected signals via respective cascades of averaging filters and outputting respective filtered detected signals" (claims 1 & 11) And "means for providing a control signal, based on the input signal contrast, to hold the frequency estimate signal stable even near edges of halftone areas, using a maximum frequency unit and a dual interpolation unit" (claim 19). The closest prior art, Schweid et al., US 6,549,658 teaches determining a screen frequency and magnitude estimation of an image signal. Either singularly or in combination with other cited references fails to anticipate or render the above underlined limitations obvious

The prior art, US 6,549,658 discloses estimating in one or more channels each exhibiting different sensitivities for providing high quality instantaneous halftone frequency and magnitude estimation and combining one or more instantaneous halftone frequency estimation from independent channels to create frequency magnitude estimation but it does not disclose detecting extrema in an image signal and a second filter output signal via a min- max texture detector included in each of frequency

detection modules, and outputting respective detected signals; and filtering the respective detected signals via respective cascades of averaging filters and outputting respective filtered detected signals; and means for providing a control signal, based on the input signal contrast, to hold the frequency estimate signal stable even near edges of halftone areas, using a maximum frequency unit and a dual interpolation unit.

The meaning of the sentence "detecting extrema in an image signal and a second filter output signal via a min- max texture detector included in each of frequency detection modules, and outputting respective detected signals; and filtering the respective detected signals via respective cascades of averaging filters and outputting respective filtered detected signals" and "means for providing a control signal, based on the input signal contrast, to hold the frequency estimate signal stable even near edges of halftone areas, using a maximum frequency unit and a dual interpolation unit" is defined in applicant's drawings and specification.

2. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

**Contact Information**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pawandeep S. Dhingra whose telephone number is 571-270-1231. The examiner can normally be reached on M-F, 9:30-7:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Twyler Lamb can be reached on 571-272-7406. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

*Pd*

Pd  
February 19, 2008

*Twyler Lamb*  
TWYLER LAMB  
SUPERVISORY PATENT EXAMINER